

PSO 0225
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UNIVERSITY OF TORONTO
UNIVERSITY EXTENSION

Session 1959-60

Course in

**NUCLEAR
ENGINEERING**

NUCLEAR ENGINEERING

PROGRAMME

Thursday

25 lectures

The course will be offered this year if there is sufficient demand.

Its object is to introduce engineers and physicists at present in business or industry to the underlying principles of nuclear reactor design and operation. A knowledge of basic mathematics is a prerequisite, and a Bachelor's degree in engineering or physics from a recognized university, or its equivalent, will greatly assist understanding of the subject matter.

LECTURER: Douglas G. Andrews, M.A., P.Eng.,
Associate Professor of Nuclear Engineering,
University of Toronto.

TIME: 7.30 p.m., Fall Term begins October 8 and ends December 10, Winter Term begins January 7 and ends April 14.

PLACE: Room 1035, Wallberg Building.

FEE: \$50.00.

Registration:

By mail or in person at Room 207, 65 St. George Street, 9 a.m. to 5 p.m. daily except Saturdays. Application forms may be obtained by writing to the Director, University Extension, 65 St. George Street, or by telephoning WA. 3-6611, locals 301, 304, 526, 527. In order to accommodate students and enable them to enrol during the evening, registrations will be taken—

Monday	September 14th
Wednesday	September 16th
Monday	September 21st
Wednesday	September 23rd
Monday	September 28th

from 7.30 to 9 p.m. in the *Wallberg Building*, corner of St. George and College Streets.

The first part covers, from an engineering standpoint, the basic constitution of the atom, elementary nuclear physics, the behaviour of neutrons, and nuclear fission.

The theory of the chain-reacting core is then developed, and extended to cover reactor dynamics, control and instrumentation. The engineering of the reactor is covered by sections on fluid dynamics, heat transfer, materials, irradiation, chemistry and corrosion.

Special hazards to health are touched upon in lectures covering health physics, radiation, and shielding, and the course concludes with a survey of existing reactor designs.

It should be noted that the content of the course can be altered to suit the requirements of the candidates.

LECTURES	TITLE
1 & 2	Elementary Nuclear Physics
3 & 4	Behaviour of Neutrons
5	Nuclear Fission
6, 7 & 8	Reactor Theory
9 & 10	Reactor Dynamics
11 & 12	Reactor Control and Instrumentation
13, 14, 15 & 16	Fluid Dynamics and Heat Transfer
17, 18, 19 & 20	Materials, Irradiation
21	Chemistry, Corrosion
22, 23 & 24	Health, Physics, Radiation Shielding
25	Survey of Reactor Designs